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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,595

12/28/2004

Reidar Schumann-Olsen

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ERICSSON INC.
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EXAMINER

AGHERA, SAMEER R

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/519,595

Applicant(s)

SCHUMANN-OLSEN, REIDAR

Examiner

Sameer Aghera

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application
- ☐ Other: ____

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :9 June 2006 and 28 December 2004.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-13, 15-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (GB 2310971 A) in view of Halder (US 2003/0202612 A1).

Ferguson discloses a SDH multiplexer comprising the following elements regarding **claim 11**, demultiplexing (see "IM," Figure 4) the first data stream (see "8 Mbit/s payload," page 6, line 4) from the first endpoint (see left end of Figure 4) onto a number of lines (see "mapped into 4x2 Mbit/s," page 6, lines 4-5) each having a second data stream with a second bit rate (see "2 Mbit/s," page 6, line 5); mapping each of the second data streams (see "mapped into 4x2 Mbit/s, 2 Mbit/s each," page 6, lines 4-5) into data bit or unused overhead bit positions of SDH specified data containers (see "then being mapped into an SDH VC of appropriate size," page 6, lines 5-6); multiplexing the data containers into the SDH switched network (see Figure 7); regarding **claim 12**, wherein steps a) and b) are switched in order to retrieve the first bit rate at the second endpoint side (see Figures 4 and 7); regarding **claim 15**, the data containers are VC-12 containers with a bit rate of 2.304 Mbit/s (see "the nominal size of a VC-12 is 2.304 Mbit/s," page 6, line 10 – the Examiner notes that there is no

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unexpected result by using 2.304 Mbit/s as compared to 2.176 Mbit/s); regarding **claim 16**, wherein the data bit positions are C-12 D-bit positions and the unused overhead bit positions are C-12 R-bit positions (see "the ATM payload could be mapped directly and more efficiently into each SDH VC-12...", page 6, lines 6-9); regarding **claim 18**, wherein the first bit rate is 8 Mbit/s (see Figure 4 – the Examiner does not see any unexpected results by using 8.448 Mbit/s instead of 8 Mbit/s); regarding **claim 20**, wherein the first data rate is X Mbits/s (see "capacity of its (N x) 155 Mbit/s," page 6, line 15) and the number of data containers are N (see "mapping of an ATM cell into various VC-n," page 6, lines 11-12), wherein X and N are any integer number.

Ferguson does not show the following elements: regarding **claim 11**, a number of SHDSL lines; regarding **claim 13**, wherein, in each of the second data streams, there is included an overhead of a third bit rate incorporating framing words; regarding **claim 18**, the third bit rate is 8 Kbit/s; regarding **claim 17**, wherein the number of SHDSLs is four, and the second bit rate is 2.120 Mbit/s; regarding **claim 20**, the second bit rate is $ix8\text{kbit/s}$ ($i \in [1,7]$) plus $nx64\text{kbit/s}$ ($n \in [1,36]$) and the number of SHDSL lines is N, wherein N is any integer number.

Halder discloses a method and system for rate enhanced SHDSL comprising the following features.

Regarding **claim 11**, a number of SHDSL lines (see Figure 2 and Title).

Regarding **claim 13**, wherein, in each of the second data streams (see "payload rate," page 4, paragraph 51), there is included an overhead of a third bit rate incorporating framing words (see "8i kbps," page 4, paragraph 51).

Regarding **claim 17**, wherein the number of SHDSLs is four (see Figure 2), and the second bit rate is 2.120 Mbit/s (see "a wide range of data rates from 192 kbps to 2.312 Mbps," page 1, paragraph 8).

Regarding **claim 18**, the third bit rate is 8 Kbit/s (see "8i kbps," page 4, paragraph 51).

Regarding **claim 20**, the second bit rate is $ix8\text{ kbit/s}$ ($i \in [1,7]$) plus $nx64\text{ kbit/s}$ ($n \in [1,36]$) (see "payload rate is given by $64n+8i$ kbps," page 4, paragraph 51) and the number of SHDSL lines is N , wherein N is any integer number (see Figure 2, s1. through sm).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ferguson with the features, as taught by Halder, in order to increase the rate of SHDSL (see Halder page 1, paragraph 8).

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson (GB 2310971 A) in view of Halder (US 2003/0202612 A1), further in view of Sakamoto (US 2005/0185577 A1).

Ferguson and Halder disclose all elements as applied to paragraph 2 above.

Ferguson and Halder do not disclose the following feature: regarding **claim 14**, where at least a part of the overhead includes frame synchronization words for securing end to end integrity of the data stream.

Sakamoto disclose an IP packet communication apparatus comprising the following features.

Regarding **claim 14**, where at least a part of the overhead (see "section overhead," page 1, paragraph 6) includes frame synchronization words (see "frame synchronization," page 1, paragraph 6) for securing end to end integrity of the data stream.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Ferguson and Halder with the features, as taught by Sakamoto, in order to provide a maintenance function of a transmission path even with IP traffic (see Sakamoto (page 1, paragraph 8)).

Allowable Subject Matter

4. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully

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consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameer Aghera whose telephone number is 571-272-9744. The examiner can normally be reached on M-F 7:30 AM to 5 PM; Off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on 571-272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SA

Sameer Aghera

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER

